

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 09/873,224B

Source: IFW/b

Date Processed by STIC: 6/30/05

# ***ENTERED***



IFW16

## RAW SEQUENCE LISTING

DATE: 06/30/2005

PATENT APPLICATION: US/09/873,224B

TIME: 08:58:27

Input Set : A:\PTO.SR.txt

Output Set: N:\CRF4\06302005\I873224B.raw

5 <110> APPLICANT: Innogenetics N.V.  
 9 <120> TITLE OF INVENTION: New sequences of hepatitis C virus genotypes for diagnosis,  
 prophylaxis

10 and therapy

13 &lt;130&gt; FILE REFERENCE: 2551-117

15 &lt;140&gt; CURRENT APPLICATION NUMBER: 09/873,224B

16 &lt;141&gt; CURRENT FILING DATE: 2001-06-05

18 &lt;150&gt; PRIOR APPLICATION NUMBER: 09/638,693

19 &lt;151&gt; PRIOR FILING DATE: 2000-08-15

21 &lt;150&gt; PRIOR APPLICATION NUMBER: 08/362,455

22 &lt;151&gt; PRIOR FILING DATE: 1995-01-11

24 &lt;150&gt; PRIOR APPLICATION NUMBER: PCT/EP94/01323

25 &lt;151&gt; PRIOR FILING DATE: 1994-04-27

27 &lt;150&gt; PRIOR APPLICATION NUMBER: EP93.401099.2

28 &lt;151&gt; PRIOR FILING DATE: 1993-04-27

30 &lt;150&gt; PRIOR APPLICATION NUMBER: EP 93.402019.9

31 &lt;151&gt; PRIOR FILING DATE: 1993-08-05

33 &lt;160&gt; NUMBER OF SEQ ID NOS: 284

37 &lt;170&gt; SOFTWARE: PatentIn version 3.1

41 &lt;210&gt; SEQ ID NO: 1

43 &lt;211&gt; LENGTH: 213

45 &lt;212&gt; TYPE: DNA

47 &lt;213&gt; ORGANISM: hepatitis C virus

51 &lt;400&gt; SEQUENCE: 1

52 ctcacggaac ggctttactg cggggggccct atgttcaaca gcaagggggc ccagtgtggt 60

54 tatcgccgct gccgtgccag tggagtctctg cctaccagct tcggcaacac aatcacttgc 120

56 tacatcaagg ccacagcggc tgcaagggcc gcaggcctcc ggaacccgga ctttcttgtc 180

58 tgcggagatg atctggtcgt ggtggctgag agt 213

61 &lt;210&gt; SEQ ID NO: 2

63 &lt;211&gt; LENGTH: 71

65 &lt;212&gt; TYPE: PRT

67 &lt;213&gt; ORGANISM: hepatitis C virus

71 &lt;400&gt; SEQUENCE: 2

73 Leu Thr Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly

74 1 5 10 15

77 Ala Gln Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr

78 20 25 30

81 Ser Phe Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Thr Ala Ala Ala

82 35 40 45

85 Arg Ala Ala Gly Leu Arg Asn Pro Asp Phe Leu Val Cys Gly Asp Asp

86 50 55 60

89 Leu Val Val Val Ala Glu Ser

90 65 70

93 &lt;210&gt; SEQ ID NO: 3

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```

95 <211> LENGTH: 213
97 <212> TYPE: DNA
99 <213> ORGANISM: hepatitis C virus
103 <400> SEQUENCE: 3
104 ctcacggaac ggctttactg cggggggccct atgttcaaca gcaagggggc ccagtgtggt      60
106 tatcgccgct gccgtgccag tggagttctg cctaccagct tcggcaacac aatcacttgc      120
108 tacatcaagg ccacagcggc tgcaagggcc gcaggcctcc ggaacccgga ctttcttgtc      180
110 tgcggagatg atctggtcgt ggtggctgag agt                                213
113 <210> SEQ ID NO: 4
115 <211> LENGTH: 71
117 <212> TYPE: PRT
119 <213> ORGANISM: hepatitis C virus
123 <400> SEQUENCE: 4
125 Leu Thr Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly
126 1          5          10          15
129 Ala Gln Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr
130          20          25          30
133 Ser Phe Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Thr Ala Ala Ala
134          35          40          45
137 Lys Ala Ala Gly Leu Arg Asn Pro Asp Phe Leu Val Cys Gly Asp Asp
138          50          55          60
141 Leu Val Val Val Ala Glu Ser
142 65          70
145 <210> SEQ ID NO: 5
147 <211> LENGTH: 213
149 <212> TYPE: DNA
151 <213> ORGANISM: hepatitis C virus
155 <400> SEQUENCE: 5
156 ctcacggagc ggctttactg cggggggccct atgtttaaca gcaagggggc ccagtgtggt      60
158 tatcgccggt gccgtgccag tggagttctg cctaccagct tcggcaacac aatcacttgt      120
160 tacatcaaag ccacagcggc cgcaaaagcc gcaggcctcc ggagcccgga ctttcttgtc      180
162 tgcggagatg atctggtcgt ggtggctgag agt                                213
165 <210> SEQ ID NO: 6
167 <211> LENGTH: 71
169 <212> TYPE: PRT
171 <213> ORGANISM: hepatitis C virus
175 <400> SEQUENCE: 6
177 Leu Thr Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly
178 1          5          10          15
181 Ala Gln Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr
182          20          25          30
185 Ser Phe Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Thr Ala Ala Ala
186          35          40          45
189 Lys Ala Ala Gly Leu Arg Ser Pro Asp Phe Leu Val Cys Gly Asp Asp
190          50          55          60
193 Leu Val Val Val Ala Glu Ser
194 65          70
197 <210> SEQ ID NO: 7
199 <211> LENGTH: 213

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```

201 <212> TYPE: DNA
203 <213> ORGANISM: hepatitis C virus
207 <400> SEQUENCE: 7
208 ctcacggagc ggctttactg cggggggccct atgtttaaca gcaaaggggc ccagtgtggt      60
210 tatcgccgtt gccgtgccag tggagttctg cctaccagct tcggcaacac aatcacttgt      120
212 tacatcaaag ccacagcggc cgcaaaagcc gcaggcctcc ggagcccgga ctttcttgtc      180
214 tgcggagatg atctggtcgt ggtggctgag agt                                213
217 <210> SEQ ID NO: 8
220 <211> LENGTH: 71
222 <212> TYPE: PRT
224 <213> ORGANISM: hepatitis C virus
228 <400> SEQUENCE: 8
230 Leu Thr Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly
231 1          5          10          15
234 Ala Gln Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr
235          20          25          30
238 Ser Phe Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Thr Ala Ala Ala
239          35          40          45
242 Lys Ala Ala Gly Leu Arg Ser Pro Asp Phe Leu Val Cys Gly Asp Asp
243          50          55          60
246 Leu Val Val Val Ala Glu Ser
247 65          70
250 <210> SEQ ID NO: 9
252 <211> LENGTH: 213
254 <212> TYPE: DNA
256 <213> ORGANISM: hepatitis C virus
260 <400> SEQUENCE: 9
261 ctcacggagc ggctttactg cggggggccct atgttcaaca gcaaggggggc ccagtgtggt      60
263 tatcgccgtt gtcgtgccag tggagttctg cctaccagtt tcggcaacac aatcacttgt      120
265 tacatcaagg ccacagcggc tgcaaaagcc gcaggcctcc ggaacccgga ctttcttgtt      180
267 tgcggagatg atttggtcgt ggtggctgag agt                                213
270 <210> SEQ ID NO: 10
272 <211> LENGTH: 71
274 <212> TYPE: PRT
276 <213> ORGANISM: hepatitis C virus
280 <400> SEQUENCE: 10
282 Leu Thr Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly
283 1          5          10          15
286 Ala Gln Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr
287          20          25          30
290 Ser Phe Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Thr Ala Ala Ala
291          35          40          45
294 Lys Ala Ala Gly Leu Arg Asn Pro Asp Phe Leu Val Cys Gly Asp Asp
295          50          55          60
298 Leu Val Val Val Ala Glu Ser
299 65          70
302 <210> SEQ ID NO: 11
304 <211> LENGTH: 213
306 <212> TYPE: DNA

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## RAW SEQUENCE LISTING

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Input Set : A:\PTO.SR.txt

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```

308 <213> ORGANISM: hepatitis C virus
312 <400> SEQUENCE: 11
313 ctcacgggagc ggctttactg cggggggcoct atgttcaaca gcaagggggc ccagtgtggt      60
315 tatcgccgtt gtcgtgccag tggagttctg cctaccagtt tcggcaacac aatcacttgt      120
317 tacatcaagg ccacagcggc tgcaaaagcc gcaggcctcc ggaacccgga ctttcttggt      180
319 tgcggagatg atttggtcgt ggtggctgag agt                                213
322 <210> SEQ ID NO: 12
324 <211> LENGTH: 71
326 <212> TYPE: PRT
328 <213> ORGANISM: hepatitis C virus
332 <400> SEQUENCE: 12
334 Leu Thr Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly
335 1              5              10              15
338 Ala Gln Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr
339              20              25              30
342 Ser Phe Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Thr Ala Ala Ala
343              35              40              45
346 Lys Ala Ala Gly Leu Arg Asn Pro Asp Phe Leu Val Cys Gly Asp Asp
347              50              55              60
350 Leu Val Val Val Ala Glu Ser
351 65              70
354 <210> SEQ ID NO: 13
356 <211> LENGTH: 541
358 <212> TYPE: DNA
360 <213> ORGANISM: hepatitis C virus
364 <400> SEQUENCE: 13
365 cgtcggcgct cctgtaggag gcgtcgcaag agcccttgcg catggcggtga gggcccttga      60
367 agacgggata aatttcgcaa caggggaattt gcccggttgc tccttttcta tcttccttct      120
369 tgctctgttc tcttgcttaa tccatccagc agctagtcta gagtggcgga acacgtctgg      180
371 cctctatgtc cttaccaacg actgttccaa tagcagtatt gtgtatgagg ccgatgacgt      240
373 tattctgcac acaccggct gtgtaccttg tgttcaggac ggtaatacat ctgcgtgctg      300
375 gacccacgtg acacctacag tggcagtcag gtacgtcgga gcaaccacg cttcgatacg      360
377 caggcatgta gacatgttgg tgggcgcggc cacgatgtgc tctgctctct acgtgggtga      420
379 tatgtgtggg gccgtcttcc tcgtgggaca agccttcacg ttcagacctc gtcgccatca      480
381 aacggtccag acctgtaact gctcactgta cccaggccat ctttcaggac accgaatggc      540
383 t                                541
386 <210> SEQ ID NO: 14
388 <211> LENGTH: 180
390 <212> TYPE: PRT
392 <213> ORGANISM: hepatitis C virus
396 <400> SEQUENCE: 14
398 Val Gly Ala Pro Val Gly Gly Val Ala Arg Ala Leu Ala His Gly Val
399 1              5              10              15
402 Arg Ala Leu Glu Asp Gly Ile Asn Phe Ala Thr Gly Asn Leu Pro Gly
403              20              25              30
406 Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu Phe Ser Cys Leu Ile His
407              35              40              45
410 Pro Ala Ala Ser Leu Glu Trp Arg Asn Thr Ser Gly Leu Tyr Val Leu
411              50              55              60

```

## RAW SEQUENCE LISTING

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Input Set : A:\PTO.SR.txt

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```

414 Thr Asn Asp Cys Ser Asn Ser Ser Ile Val Tyr Glu Ala Asp Asp Val
415 65              70              75              80
418 Ile Leu His Thr Pro Gly Cys Val Pro Cys Val Gln Asp Gly Asn Thr
419              85              90              95
422 Ser Ala Cys Trp Thr Pro Val Thr Pro Thr Val Ala Val Arg Tyr Val
423              100             105             110
426 Gly Ala Thr Thr Ala Ser Ile Arg Arg His Val Asp Met Leu Val Gly
427              115             120             125
430 Ala Ala Thr Met Cys Ser Ala Leu Tyr Val Gly Asp Met Cys Gly Ala
431              130             135             140
434 Val Phe Leu Val Gly Gln Ala Phe Thr Phe Arg Pro Arg Arg His Gln
435 145              150              155              160
438 Thr Val Gln Thr Cys Asn Cys Ser Leu Tyr Pro Gly His Leu Ser Gly
439              165              170              175
442 His Arg Met Ala
443              180
446 <210> SEQ ID NO: 15
448 <211> LENGTH: 541
450 <212> TYPE: DNA
452 <213> ORGANISM: hepatitis C virus
456 <400> SEQUENCE: 15
457 cgtcggcgct cctgtaggag gcgtcgcaag agcccttgcg catggcggtga gggcccttga      60
459 agacgggata aatttcgcaa cagggaattt gcccggttgc tccttttcta tcttccttcc      120
461 tgctctgttc tcttgcttaa tccatccagc agctagtcta gagtggcgga acacgtctgg      180
463 cctctatgtc cttaccaacg actgttccaa tagcagtatt gtgtatgagg ccgatgacgt      240
465 tattctgcac acaccgggct gtgtaccttg tgttcaggac ggtaatacat ctgcgtgctg      300
467 gacccagctg acacctacag tggcagtcag gtacgtcgga gcaaccaccg cttcgatacg      360
469 caggcatgta gacatattgg tgggcgcggc cacaatgtgc tctgctctct acgtgggtga      420
472 tatgtgtggg gccgtcttcc tcgtgggaca agccttcacg ttcagacctc gtcgccatca      480
474 aacggtccag acctgtaact gctcactgta cccaggccat ctttcaggac accgaatggc      540
476 t                                                                541
479 <210> SEQ ID NO: 16
481 <211> LENGTH: 180
483 <212> TYPE: PRT
485 <213> ORGANISM: hepatitis C virus
489 <400> SEQUENCE: 16
491 Val Gly Ala Pro Val Gly Gly Val Ala Arg Ala Leu Ala His Gly Val
492 1              5              10              15
495 Arg Ala Leu Glu Asp Gly Ile Asn Phe Ala Thr Gly Asn Leu Pro Gly
496              20              25              30
499 Cys Ser Phe Ser Ile Phe Leu Pro Ala Leu Phe Ser Cys Leu Ile His
500              35              40              45
503 Pro Ala Ala Ser Leu Glu Trp Arg Asn Thr Ser Gly Leu Tyr Val Leu
504              50              55              60
507 Thr Asn Asp Cys Ser Asn Ser Ser Ile Val Tyr Glu Ala Asp Asp Val
508 65              70              75              80
511 Ile Leu His Thr Pro Gly Cys Val Pro Cys Val Gln Asp Gly Asn Thr
512              85              90              95
515 Ser Ala Cys Trp Thr Pro Val Thr Pro Thr Val Ala Val Arg Tyr Val

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/873,224B

DATE: 06/30/2005  
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**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:55; N Pos. 191  
Seq#:56; Xaa Pos. 64  
Seq#:57; N Pos. 185,191,276  
Seq#:58; Xaa Pos. 62,64,92  
Seq#:59; N Pos. 38,76,79,151,232,349  
Seq#:60; Xaa Pos. 13,26,27,51,78,117  
Seq#:61; N Pos. 38,70,174,339  
Seq#:62; Xaa Pos. 13,24,58,113  
Seq#:147; N Pos. 50  
Seq#:148; Xaa Pos. 17  
Seq#:165; N Pos. 306,313,340  
Seq#:166; Xaa Pos. 102,105,114  
Seq#:179; N Pos. 568,569,570,571,572,573,574,575,576,577,578,579  
Seq#:180; Xaa Pos. 24,190,191,192,193  
Seq#:181; N Pos. 152  
Seq#:182; Xaa Pos. 51  
Seq#:197; N Pos. 787,1011,1444  
Seq#:198; Xaa Pos. 263,337,482  
Seq#:199; N Pos. 684,909,1058,1133  
Seq#:200; Xaa Pos. 228,303,353,378  
Seq#:209; N Pos. 13,23,65,72,277,337  
Seq#:210; Xaa Pos. 8,22,24  
Seq#:211; N Pos. 11,327,333,334,340  
Seq#:212; Xaa Pos. 4,109,111

**Invalid <213> Response:**

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,124,125,141  
Seq#:142

**VERIFICATION SUMMARY**

DATE: 06/30/2005

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Input Set : A:\PTO.SR.txt

Output Set: N:\CRF4\06302005\I873224B.raw

L:2328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:180  
L:2369 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:48  
L:2438 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57 after pos.:180  
M:341 Repeated in SeqNo=57  
L:2500 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58 after pos.:48  
M:341 Repeated in SeqNo=58  
L:2595 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:59 after pos.:0  
M:341 Repeated in SeqNo=59  
L:2670 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60 after pos.:0  
M:341 Repeated in SeqNo=60  
L:2753 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61 after pos.:0  
M:341 Repeated in SeqNo=61  
L:2818 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:62 after pos.:0  
M:341 Repeated in SeqNo=62  
L:4932 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:147 after pos.:0  
L:4953 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:148 after pos.:16  
L:5673 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:165 after pos.:300  
L:5749 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:166 after pos.:96  
M:341 Repeated in SeqNo=166  
L:6376 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:179 after pos.:540  
L:6415 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:180 after pos.:16  
M:341 Repeated in SeqNo=180  
L:6488 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:181 after pos.:120  
L:6540 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:182 after pos.:48  
L:7272 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:197 after pos.:780  
M:341 Repeated in SeqNo=197  
L:7403 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:198 after pos.:256  
M:341 Repeated in SeqNo=198  
L:7537 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:199 after pos.:660  
M:341 Repeated in SeqNo=199  
L:7675 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:200 after pos.:224  
M:341 Repeated in SeqNo=200  
L:8086 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:209 after pos.:0  
M:341 Repeated in SeqNo=209  
L:8141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:210 after pos.:0  
M:341 Repeated in SeqNo=210  
L:8224 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:211 after pos.:0  
M:341 Repeated in SeqNo=211  
L:8280 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:212 after pos.:0  
M:341 Repeated in SeqNo=212